

## REMARKS

When the present Office Action was mailed (September 13, 2005), claims 50-83 were pending, with claims 56, 75, and 78-83 withdrawn. Claims 69-72 and 74-77 have been amended. More specifically, claims 70 and 76 have been rewritten in independent form to include all the features of the corresponding base claim and any intervening claims, as well as being amended to clarify certain features of these claims. Claims 69, 71, 72, 74, 75, and 77 have been amended solely to change the dependencies of these claims and/or correct the antecedent basis of certain features of these claims. Claims 68 and 73 have been cancelled without prejudice to pursuing these claims in a continuation, divisional, reissue, or other application. Accordingly, claims 50-67, 69-72, and 74-83 remain pending, with claims 56, 75, and 78-83 withdrawn.

In the September 13 Office Action, claims 50-55, 57-62, 64-74, 76, and 77 were rejected. More specifically, the status of the application in light of this Office Action is as follows:

- (A) Claim 77 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention;
- (B) Claims 50-55, 57-62, 64-74, 76, and 77 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,658,327 to Hernandez ("Hernandez"); and
- (C) Claims 68, 69, 71-74, and 77 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,278,176 to Nakamura et al. ("Nakamura").

### A. Response to the Section 112 Rejection of Claim 77

Claim 77 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. Claim 77 has been amended in accordance with

the Examiner's suggestions and, accordingly, the Section 112 rejection of claim 77 should be withdrawn.

B. Response to Section 102 Rejection of Claims 50-55, 57-62, 64-74, 76, and 77 (Hernandez)

Claims 50-55, 57-62, 64-74, 76, and 77 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hernandez. Claims 68 and 73 have been cancelled and, accordingly, the rejection of these claims is now moot. For the reasons explained below, the Section 102 rejection of claims 50-55, 57-62, 64-67, 69-72, 74, 76, and 77 is not proper because Hernandez fails to disclose or suggest all the claimed features.

1. Independent Claim 50 Includes, *Inter Alia*, a First Packaged Microelectronic Device Having a First Microelectronic Die Connected to a Support Member and/or Support Member Circuitry, and a Second Packaged Microelectronic Device Having a Second Microelectronic Die Connected to the Support Member and/or Support Member Circuitry Without Being Fixedly Attached to the First Packaged Device

Independent claim 50 is directed to an assembly of packaged microelectronic devices. The assembly includes a support member having support member circuitry. The assembly further includes a first packaged microelectronic device with a first microelectronic die generally encased in a first encapsulant to define a first package configuration. The first packaged microelectronic device is connected to at least one of the support member and the support member circuitry. The assembly also includes a second packaged microelectronic device connected to at least one of the support member and the support member circuitry with the first packaged microelectronic device positioned between the support member and the second packaged microelectronic device. The second packaged microelectronic device includes a second microelectronic die generally encased in a second encapsulant to define a second package configuration different than the first package configuration. The second packaged microelectronic device is not fixedly attached to the first packaged microelectronic device.

2. Hernandez Discloses Decoupling Capacitors for Use in Pin Grid Array (PGA) Integrated Circuit Packages

Hernandez discloses decoupling capacitors for use in PGA-type integrated circuit packages and plastic leaded chip carrier packages. Referring to Figures 3 and 4, Hernandez discloses a PGA package 28 including a square or rectangular base portion 30 and a plurality of pins 32 projecting from the base portion 30. (Hernandez, col. 4, Ins. 53-63.) The PGA package 28 further includes a chip cavity area 34 configured to "receive[] an integrated circuit chip (not shown) to complete the PGA package [28]." (Id. at Ins. 65-67.) Referring next to Figure 7, Hernandez discloses a decoupling capacitor 26 including "a dielectric material or dielectric chip 38 . . . sandwiched between a pair of metal conductors 40 and 42. Each conductor 40, 42 has a plurality of leads 44 and 46 [that] are connected thereto and extend outwardly therefrom." (Hernandez, col. 5, Ins. 22-27.)

The PGA package and decoupling capacitor are both mounted on a printed circuit board. Referring to Figure 9A, for example, Hernandez discloses a decoupling capacitor 52 (similar to the decoupling capacitor 26 described above) mounted on a printed circuit board 54 underneath a PGA package 56 (similar to the PGA package 28 described above). The decoupling capacitor 52 and PGA package 56 are both electrically coupled to the printed circuit board 54 and to each other. (Hernandez, col. 6, Ins. 20-39.)

3. Claim 50 is Patentable over Hernandez Because this Reference Fails to Disclose or Suggest a First Packaged Device Having a First Microelectronic Die and a Second Packaged Device Having a Second Microelectronic Die

Claim 50 includes a first packaged microelectronic device having a first microelectronic die and a second packaged microelectronic device having a second microelectronic die. In contrast, the device of Hernandez only includes a single microelectronic die within the PGA package 56. The decoupling capacitor 52 is not a first packaged microelectronic device having a first microelectronic die as required by claim 50. A capacitor is an electrical device having two conductors (e.g., metal plates) isolated by a dielectric material capable of storing an electrical charge that can be

released at a controlled rate and at a specified time. The decoupling capacitor 52 of Hernandez, for example, includes the dielectric material 38 between two metal conductors 40 and 42. In many applications, decoupling capacitors (such as the one in Hernandez) are used to block DC current or specific frequencies from passing from one stage of a circuit to another. Such capacitors generally do not need to (and, accordingly, generally do not) include microelectronic dies.

The Office Action asserts that it is "inherent" that the decoupling capacitor 52 of Hernandez includes a microelectronic die. (Office Action, p. 3.) This is not correct. Section 2112 of the MPEP requires that when "relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." (MPEP § 2112 (citing *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis added).) In the present case, the Office Action has provided no basis in fact or technical reasoning to support the theory that the decoupling capacitor of Hernandez (or any other type of capacitor) includes a microelectronic die. Furthermore, Hernandez fails to teach or suggest any other configuration or arrangement that includes a first packaged microelectronic device having a first die and second packaged microelectronic device having a second die as is included in claim 50. Accordingly, the Section 102 rejection of claim 50 over Hernandez should be withdrawn because the applied reference fails to teach or suggest all the claimed features.

Claims 51-54 depend from base claim 50. As discussed above, claim 50 is allowable. Accordingly, dependent claims 51-54 are allowable as depending from claim 50, and also because of the additional features of these dependent claims. Therefore, the Section 102 rejection of claims 51-54 should be withdrawn.

Independent claims 57, 65, 70, and 76 include several features generally similar to claim 50 (e.g., a first packaged microelectronic device having a first microelectronic die and a second packaged microelectronic device having a second microelectronic die.) Accordingly, for the reasons discussed above with respect to claim 50, and for the

additional features of these claims, the Section 102 rejection of independent claims 57, 65, 70, and 76 is unsupported by Hernandez and should be withdrawn.

Claims 58-62 depend from base claim 57, claims 64, 66, and 67 depend from base claim 65, claims 69, 71, and 72 depend from base claim 70, and claims 74 and 77 depend from base claim 76. As discussed above, claims 57, 65, 70, and 76 are allowable. Therefore, claims 58-62, 64, 66, 67, 69, 71, 72, 74, and 77 are allowable as depending from one of the allowable base claims 57, 65, 70, and 76, and also because of the additional features of these dependent claims. Accordingly, the Section 102 rejection of claims 58-62, 64, 66, 67, 69, 71, 72, 74, and 77 should be withdrawn.

C. Response to the Section 102 Rejection of Claims 68, 69, 71-74, and 77 (Nakamura)

Claims 68, 69, 71-74, and 77 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Nakamura. Claims 68 and 73 have been cancelled and, accordingly, the rejection of these claims is now moot.

Claims 69, 71, and 72 have been amended to depend from base claim 70, and claims 74 and 77 have been amended to depend from base claim 76. For at least the reasons discussed above, claims 70 and 76 are allowable. Accordingly, claims 69, 71, 72, 74, and 77 are allowable for at least the reason that corresponding base claims 70 and 76 are allowable, and for the additional features of these dependent claims. Therefore, the Section 102 rejection of dependent claims 69, 71, 72, 74, and 77 should be withdrawn.

Conclusion

In view of the foregoing, the pending claims comply with 35 U.S.C. § 112 and are patentable over the applied art. The applicant respectfully requests reconsideration of the application and a mailing of a Notice of Allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-3982.

Respectfully submitted,

Perkins Coie LLP



Aaron J. Poledna  
Registration No. 54,675

Date: 12/12/05

**Correspondence Address:**

Customer No. 25096  
Perkins Coie LLP  
P.O. Box 1247  
Seattle, Washington 98111-1247  
(206) 359-8000